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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,952	08/22/2003	Georg Stoppelmann	112843-061	2987
7590 10/19/2006				
Bell, Boyd & Lloyd LLC P.O. Box 1135 Chicago, IL 60690-1135			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT 1714	PAPER NUMBER

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/646,952	STOPPELMANN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Patrick D. Niland	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/24/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-29 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-29 and 31-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-946) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/24/06 has been entered.

The amendment of 6/23/06 has been entered. Claims 1-5, 7-29, and 31-35 are pending.

2. Claims 1-5, 7-29, and 31-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While there was a question in the prior 35 USC 112 second paragraph rejection of "high viscous" as to exactly where the line of demarcation was between high and low viscous, it was not questioned that there was some line of demarcation between these two degrees of viscosity. The enabling specification requires "high viscous". The deletion of "high viscous" from the claims makes the new claims read on "low viscous" materials which are not considered to be part of the applicant's invention according to the enabling specification. This incorporation of "low viscous" materials into the claims is new matter.

3. Claims 1-5, 7-29, and 31-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. Claims 1-5, 7-29, and 31-35 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The new claim scope resulting from the deletion of the terminology “high viscous”, deemed to be critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Throughout the enabling specification beginning at the first line thereof, the applicant makes it clear that they require their material to be “high viscous” material.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-29, and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6548587 Bagrodia et al..

Bagrodia discloses the instantly claimed inventions with the exception of being silent regarding the amount of impact modifier and fiber. See the entire document. The burden is on the applicant to show that no “typical mineral filler” exists which would not give the instantly claimed difference in melt strength. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed amounts of the fiber and impact modifier in the nanocomposites of the patentee because these additives are broadly disclosed at column 12, lines 41-42, it is within the ability of the ordinary skilled artisan to choose the amounts of these fillers/additives based on the desired properties each filler is known to contribute to the final composition in proportion to its amount based on the fact that these are

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said to be well known additives and the silence of the patentee with regard to choosing amounts of these well known additives. In other words, the amounts of the instant claims are expected to contribute only predictable properties to the final composite. See column 12, lines 36-52 and column 22, lines 43-51. The amount of nano filler is met at column 22, lines 60-65.

The instant claims require the difference in melt strength to be due to the nano scale fillers. The patentee discloses the instantly claimed amounts of nanoscale fillers at column 22, lines 60-65 as stated above. Since the composition of the patentee has the instantly claimed amount of nano scale filler it must have the required improvement over compositions containing typical mineral fillers of some amount. The instantly claimed components b and c are expected to improve the modulus of the composite by their nature. This will lead to an increase in strength including melt strength, in proportion to the amount of these components. The applicant provides no evidence that the instantly claimed amounts of these components gives an unexpected result in a manner commensurate in scope with the instant claims and the cited prior art. The applicant's arguments in this regard lack probative support. Arguments that the ordinary skilled artisan would not use the combination of nano fillers, fibrous fillers, and impact modifiers to achieve greater melt strength is not material to the rejection because the claims do not require this. The claims only require "similar" material to have higher melt strength as related to the presence of the nano filler. The prior art requires the nano filler. The applicant does not require increased melt strength due to impact modifier, which might decrease melt strength depending on its specific melt characteristics within nylon and by itself. Fiber is expected to increase melt strength above the melting point of the polyamide and below the melting point of the fiber necessarily and inherently. This would be clear to the ordinary skilled

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artisan who has actually worked with fiber reinforced resins. There is no showing of unexpected result in a manner commensurate in scope with the instant claims and the cited prior art. The applicant's argued reason for lack of motivation to use fiber and impact modifier with the compositions of the patentee ignore the clear teaching of the patentee that these things can be used. It is not required that they be used for the purpose of increasing melt strength though glass fiber will always increase melt strength above the melting point of the polyamide/impact modifier mixture, if said impact modifier can actually melt, and below the melting point of the glass. For these reasons, this rejection is maintained.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

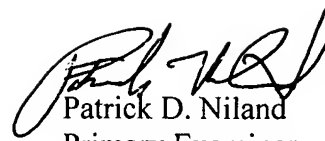
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'P. D. Niland', is positioned above the printed name.

Patrick D. Niland  
Primary Examiner  
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